

SH 365
.M3 G7
Copy 1

NOTES

ON THE

History of the Oyster in Maryland

AND THE

Physical Valuation of Her Oyster Properties

BY

CASWELL GRAVE

Of the Johns Hopkins University and Maryland Shell Fish Commission.

RECEIVED
JAN 20 1912

NOTES

ON THE

History of the Oyster in Maryland

AND THE

Physical Valuation of Her Oyster Properties

BY

CASWELL GRAVE

Of the Johns Hopkins University and Maryland Shell Fish Commission.

2
2
2 2 2
2 0
2 0 0
2 2 2

SH365
M367

21

270.0.6.7/12

OYSTER HISTORY.

Origin of the Oyster Industry in Maryland.

A study of the history of the oyster industry of Maryland shows that oysters became commercially important to the State during and after the period between 1836 and 1848 when the processes of raw and steam packing were invented, and when railway connections between Baltimore and the West were being established and extended, thus providing the conditions under which a great oyster trade could be established and developed.

Period of Growth.

Between this period and the year 1884 a gigantic industry in catching, packing, canning and shipping oysters was developed in Baltimore and in the towns on the shores of the Chesapeake.

The growth of the industry during this period is shown by the output of oysters from the natural oyster bars of the State :

710,000 bushels in 1839.		
1,350,000	"	" 1850.
2,610,000	"	" 1856-57.
3,500,000	"	" 1858-59.
4,879,000	"	" 1865-66.
8,040,000	"	" 1868-69.
9,233,000	"	" 1869-70.
14,000,000	"	" 1874-75.
15,000,000	"	" 1884-85.

Period of Decline.

The same causes which led to the development of the oyster industry, however, are the same which finally resulted in its decline ; that is, the steadily increasing demand for oys-

ters brought about by the continued extension of railway communications with the West finally reached such a magnitude that it could not be supplied by the natural oyster beds without serious and permanent injury. In an attempt to supply it more than the normal annual increase of the beds had to be taken. In other words, the oyster resources of Maryland were sacrificed.

The maximum output from the Public Oyster Fishery was reached in 1884-85, and from this date there has been a steady decline in the annual product harvested by Maryland oystermen.

The extent of this decline is shown by the following statistics :

15,000,000	bushels in 1884-85.
10,450,000	" " 1888-89.
9,945,000	" " 1889-90.
11,632,000	" " 1891-92.
10,142,000	" " 1892-93.
7,254,000	" " 1897.
5,685,000	" " 1900-01.
4,500,000	" " 1904.
6,232,000	" " 1907-09.
3,500,000	" " 1910-11.

Investigations.

During this period of decline in the output from the natural oyster beds three surveys and investigations have been carried on, and in each case the cause for the decline has been ascertained to be deterioration of the natural oyster beds from overfishing.

The area of oyster grounds which were formerly productive, but which are now practically barren and without the ability to be restocked through natural means, aggregates about 100,000 acres.

Until this exhausted area is brought again into a state of productivity through methods practiced by oyster culturalists it is not probable that the yield of the oyster lands of Maryland in 1884-85 will ever be equaled.

Protective measures such as the CULL LAW and CLOSED SEASONS may serve a useful purpose in checking further destruction of the remaining natural oyster bars, *but they do not result in an extension of the productive area, increase the quantity produced, or improve the quality of the product.*

Unaided Nature Powerless to Repair the Damage.

The hopelessness of waiting for the exhausted oyster grounds to be restocked by nature is well illustrated by the effect of the very remarkable "set" of spat which took place on the natural beds in 1905-06 and 1906-07. This "set" was general throughout the State and most generous in quantity, yet the condition of the exhausted grounds remained unchanged. Even the effect of this "set" on the entire oyster fishery grounds lasted but about three years—the average life of an oyster. The output was temporarily increased about two millions bushels during the seasons of 1907-08 and 1908-09, but in 1910-11 it fell to $3\frac{1}{2}$ millions bushels.

Oyster Culture an Untried Remedy.

To place new cultch on these exhausted grounds—to plant them with the kind and quantity of oysters suited to their ability to produce, and to give to the grounds and their product the attention they need, *requires the interest of private ownership and control. No student of human nature will deny this conclusion.*

For nearly thirty years oyster culture has been asking to be given an opportunity to restore to productivity the exhausted oyster grounds of this State and to develop the latent possibilities of certain barren bottoms.

With a fair opportunity, oyster culture promises in time to increase many fold the present output of oysters, to improve the quality of a fair proportion of the product, and to make the oyster resources of the State self-supporting and *productive of revenue instead of a burden* as is the case at the present time.

The Real Question.

Why not give oyster culture a fair trial? With the completion of the present "oyster survey" all valid objections have been removed.

WHAT ARE THE OYSTER LANDS OF MARYLAND WORTH?

Basis for Estimate.

The total direct income from the natural oyster bars of Maryland is the combined net profit of the oystermen who gather the product, and of the packers and dealers engaged in canning and distributing oysters.

After averaging for a long period of years the cost of gathering oysters and the prices received by oystermen for their catch, it is estimated that the average net income to oystermen on every bushel of oysters taken from the natural oyster beds is about *twenty-five cents*. And by a similar process it is estimated that the average net gain to packers and canners on each bushel of oyster handled is about *twenty cents*.

Combining these net incomes we have *forty-five cents* as the average *total income* on each bushel yielded by the oyster lands of the State.

Physical Valuation.

This profit of forty-five cents per bushel may then be used in arriving at a conservative estimate of the value of the lands themselves.

In the computations it is assumed that the annual net income from an enterprise as hazardous as that of oyster production, should be not less than ten per cent of the value of the capital invested.

Physical Valuation of the Oyster Properties of Maryland Based on Past Records of Production.

1873-88 :—During the period between 1873 and 1888, the average annual yield of the natural oyster bars of Maryland was about 12,000,000 bushels.

12,000,000 bushels at a combined net profit to the oysterman and the packer of 45 cents per bushel gives a total net income of \$5,400,000.

A net income of \$5,400,000 capitalized on a basis of ten per cent gives a "going" physical valuation of the oyster properties of Maryland on the basis of an average of fifteen years of over FIFTY MILLIONS OF DOLLARS.

If our natural oyster resources produced this amount during a period of fifteen years they are capable of being made to produce this amount again, hence FIFTY MILLION DOLLARS as a valuation of the *natural* oyster resources of Maryland is a conservative one.

1906-7: The present, "oyster survey," or inventory as it might be better called, of the oyster lands of this State was organized during this period. And the output from the oyster fishery during the preceding season was 4,500,000 bushels of oysters.

4,500,000 bushels at a combined net profit to the oysterman and the packer of 45 cents per bushel gives a net income of \$2,025,000.

A net income of \$2,025,000 capitalized on a basis of ten per cent. gives a "going" physical valuation to the depleted and undeveloped resources of Maryland of 1904-'06 of **TWENTY MILLIONS OF DOLLARS.**

1910-11: In this season it is estimated that the production of oysters in Maryland was only 3,500,000 bushels.

3,500,000 bushels at a combined net profit to the oysterman and the packer of 45 cents per bushel gives a net income of \$1,575,000.

A net income of \$1,575,000 capitalized on a basis of ten per cent. gives a "going" physical valuation of the much depleted oyster properties of Maryland of *only* **FIFTEEN MILLIONS OF DOLLARS.**

Note: Contrast the figures developed by the preceding valuations:

Fifteen years ending 1888 (average) .	\$50,000,000
Season 1904-06	20,000,000
Season 1910-11	15,000,000

In the face of these facts can a doubt remain that it is time for Maryland to do something to restore to the people of Maryland the income from the *thirty-five millions of dollars* of property made useless and unproductive through a lack of remedial legislation. And this takes no account of what may be done by the cultivation of oysters on bottoms where oysters have never grown before.

Physical Valuation of the Oyster Properties of Maryland in the Future.

If oyster culture and oyster cultural methods only promised to develop the oyster properties of the State so that they will be made to produce their former average yield, it would be enough to warrant their trial, *but they promise more.*

They promise ultimately to bring 100,000 acres of now unproductive grounds into productivity, and to so improve the product that the combined net income to the oystermen and the packer from growing and handling oysters will be 75 cents per bushel for these cultivated oysters as contrasted with 45 cents per bushel for oyster from public oyster bars.

They also promise to increase the yield of the natural beds to 75 bushels per acre instead of 30 bushels which was their average yield in 1907-'09.

(*Note*—In the season 1910-11 the average yield was less than 20 bushels per acre.)

Using the preceding reasonable assumptions as a basis the future physical valuation of the oyster properties of Maryland may be figured as follows :

200,000 acres, 75 bushels, 45 cents .	\$6,750,000
100,000 " 75 " 75 " .	5,625,000
Total Net Income . . .	\$12,375,000

Capitalized on the basis of ten per cent., the figures just developed, gives a future physical valuation to the *state owned* oyster properties of Maryland of over ONE HUNDRED AND TWENTY MILLION OF DOLLARS.

This takes no account of what may be done by the cultivation of oysters on bottoms where oysters have never grown before, and the extent of these bottoms is 200,000 acres.

The Real Question Repeated.

Why not give oyster culture a fair trial? With the completion of the present "oyster survey" all valid objections have been removed.

OBJECTIONS TO OYSTER CULTURE.

The beneficiaries of the Public Oyster Fishery of Maryland have always predicted dire calamity to their rights from oyster culture. No sooner has one of their fears been shown to be without foundation than another has been conjured up. In 1906 the objection to oyster culture was that :

Planters Will Lease Natural Oyster Bars.

It was claimed by oystermen that oyster culture is only a ruse by which private interests plan to get hold of the natural oyster bars. It was further claimed that oysters will not grow where they are not now growing and that the bottoms not now productive are worthless for oyster production and that the planters do not want them.

In 1906 these objections were overruled and enough of the proposed oyster culture bill was enacted to provide for a complete survey of the oyster lands of the State. As a result of this survey *all of the natural oyster bars of the State have been reserved as a Public Oyster Fishery. Thus, instead of sacrificing the rights of oystermen to the natural oyster bars to private interests, the State has reserved an area of oyster lands greater by more than 90,000 acres than oystermen ever laid claim to.* Not an acre of this enormous reserved area can be leased for the purposes of oyster culture.

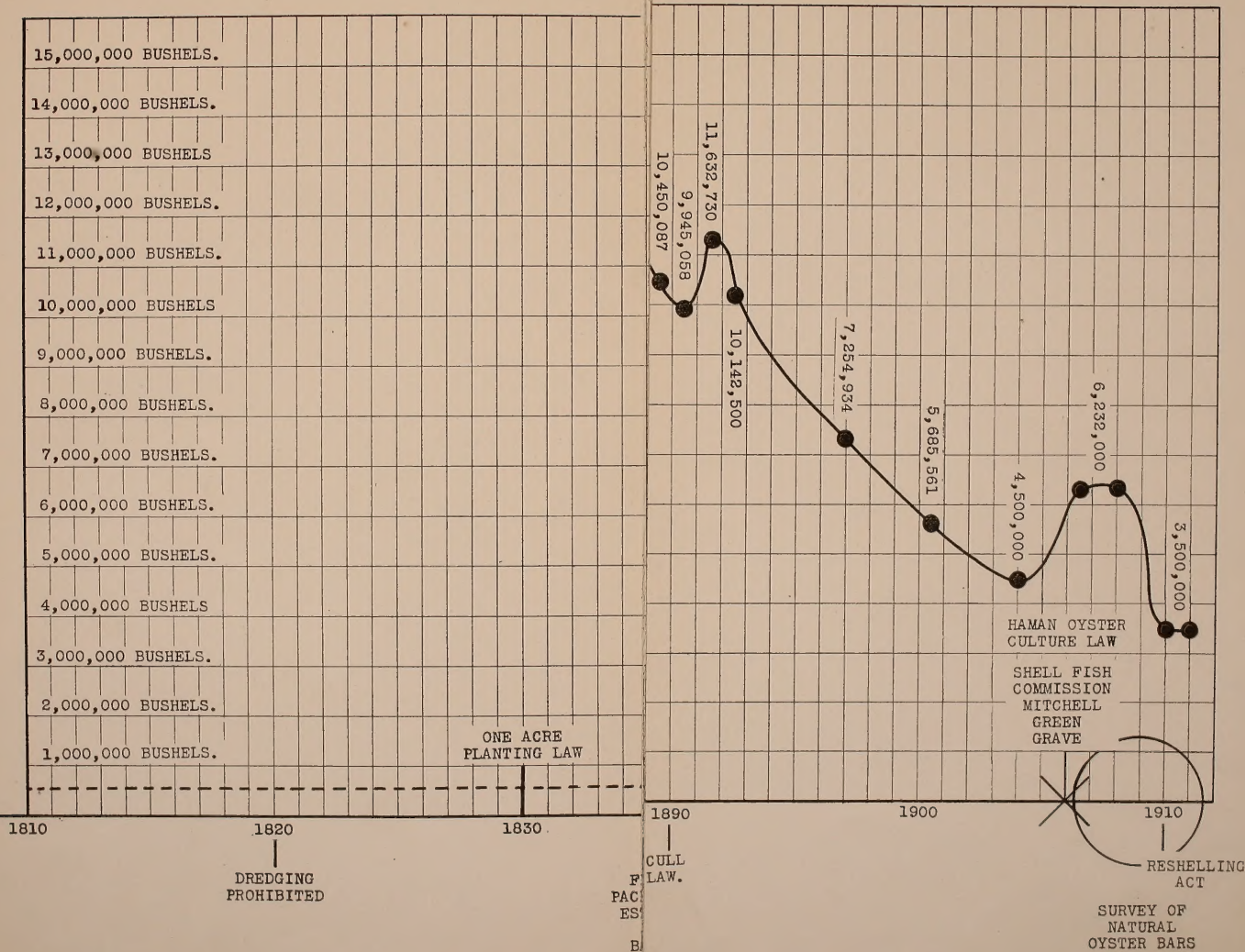
Planters Will Steal Oysters from the Natural Bars.

The fears of oystermen in 1906 have been shown to have been without foundation but *now* they are opposed to the granting of the rights and privileges essential for successful oyster culture on the ground that lessees of barren bottoms will steal oysters from the natural oyster bars with which to stock their private leased beds.

This fear of oystermen has been met by the advocates of oyster culture with the proposition that heavy penalties be provided for theft of oysters from the natural oyster bars—confiscation of boat, cancelation of lease, fine and imprisonment.. Could the good faith of the advocates of oyster culture for Maryland be more fully guaranteed? The trespass of planters upon the natural oyster bars can be easily detected. Every oysterman will be on the lookout for such trespass, and they are legion in every locality. No planter will be such a fool as to risk his reputation and property for booty so small and so cheaply purchased during the open oyster season.



Diagram Showing the in Maryland.



LIBRARY OF CONGRESS



0 002 896 793 7